

Abstract

A duplexing communication signal filter has a substantially U-shaped core of dielectric material including a transmit arm, a receive arm and a base portion joining the transmit arm to the receive arm. Both the transmit arm and the receive arm each define a series of through-hole resonators. Present on the core of dielectric material is a surface-layer pattern of metallized and unmetallized areas. The pattern includes a wide area of metallization for providing off-band signal absorption, a first unmetallized area surrounding a plurality of the through-hole openings of the transmit arm, a second contiguous unmetallized area surrounding a plurality of the through-hole openings of the receiver arm, a transmitter pad metallized area on the transmit arm, a receiver pad metallized area on the receive arm, and an antenna pad metallized area.

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